

curious circumstance that the drama of life should have followed the same course at different periods of geological time. although the personnel so to speak of the actors has been altogether different. During the Mesozoic epoch. for instance mammals were few and of a backward or unspecialized kind. and the lead in the animal kingdom was taken by enormous reptiles of which our lizards and turtles are the degenerate survivors. Yet we find that to those reptiles parts were distributed which resembled very closely those now taken by mammals. Some were carnivorous. others were herbivorous : some. like bats. haunted the air. and others. like whales. the sea. A similar generalization may be made of the plants which flourished at the time the coal measures were formed.

Timber trees occurred rarely : their places were taken by gigantic ferns and club-mosses. some of which stood 60 feet high. It is a striking tact that these plants grew not by annual additions to their tips. like the existing degenerate ferns and club-mosses. but by the formation of annual rings round the stem—after the fashion that is to say of timber trees. Life has repeated its functions

with organisms which have differed very widely in physical development. and we seem to be in the presence of an energy that can act independently of form. We have reason to conclude that a living creature is in fact constituted by the union of two very different elements. one of which

Matter—is
subject to such natural laws as those
of ^{gravity}
and chemical reaction, whilst the other **r**
—Life—
may entirely disregard them.